

## INTRODUCTION

*All of North Carolina's cultural institutions work together to make the state's unique cultural and historical resources accessible for the education and enjoyment of people of all ages in the state, nation, and the world.*

*Vision Statement of the NC ECHO Advisory Committee*

North Carolina has many treasures -- letters written by slaves, tape-recorded reminiscences of old veterans, quilts pieced together from family scraps, photographs of main streets long vanished, paintings by old masters, and diaries of young dreamers. Over the years, the state's libraries, museums, archives, and historical and genealogical societies have diligently collected, preserved, and made accessible special materials such as these to educate, entertain, and enlighten their communities. And among the stacks, storage rooms, and locked cases rests the raw material that will undoubtedly inspire future letters or books, tape recordings, handicrafts, photographs, artwork, and dreams.

In 1998, the State Library Commission made the task of making these treasures more accessible to the people of North Carolina one of its priorities. In essence, they sought to bring these treasures out of the stacks, opening the storage rooms, and unlocking the cases. The following year, the Commission appointed an Access to Special Collections Working Group (ASCWG) to begin the planning process by which this greater access would occur. ASCWG determined that the State's cultural institutions could best achieve this greater access by making use of digital technologies and the World Wide Web. Seeking input from their colleagues, ASCWG held a Special Collections Leadership Conference, in High Point, North Carolina, in March of 2000. Approximately, one hundred twenty representatives of the State's libraries, archives, museums, and historical and genealogical societies gathered to review the progress of major digitization programs from around the country and to make recommendations for a North Carolina project. These representatives reached a consensus for statewide action that included the call for:

- Long-term vision for the project, as well as a process by which to execute it;
- Searchable Web Portal to present existing digital materials and their finding aids created and maintained by North Carolina institutions;
- Set of standards for digitization and access of digital materials;
- Statewide survey of cultural repositories to identify needs, priorities, and opportunities;
- and North Carolina's Department of Cultural Resources to take the leadership role in the project.

This statewide action has been addressed in a variety ways. A survey was created and all 100 North Carolina counties were all visited by December 2005 (<http://www.ncecho.org/travelog/travelog.asp>). On-going surveying and a final report are currently underway. Continuing education programs have been developed and are held on an on-going basis for cultural institutions ([http://www.ncecho.org/conted/continuing\\_education\\_template.asp](http://www.ncecho.org/conted/continuing_education_template.asp)). Other initiatives include metadata standards, search and retrieval development, and K-12 initiatives involving partners with other statewide programs. In accordance with these initiatives,

these guidelines provide an overview of some major issues involved in digitization, some of the best practices being followed in the field, and "a set of standards for digitization and access of digital materials" for those institutions wishing to participate in the statewide program.

Drawing upon information provided by leaders in the field of digitization, these guidelines will ask and attempt to answer some of the questions institutions involved in digitization will want to ask themselves or others. Knowing what questions to ask and when to ask them is a key to any successful effort. Answers to these questions can come from within the institution or organization, or from a variety of other sources. This guide is just one of the sources to consult when addressing key digitization issues. In addition, the guidelines do not represent a static document. As technology development creates new techniques, processes and concerns, the NC ECHO *Guidelines for Digitization* are revised to represent timely advice. If more extensive information is needed, there are links to national and international digitization literature at the end of each chapter. A Resources section at the end of the guidelines groups all documents and links in one place for easy access.

### **Are You Ready to Digitize Your Collections?**

Cultural institutions face many challenges. They collect, preserve, and make their special materials available to the public, often with limited resources. Digitization appears to be yet another major project. Yet the long-term promise of digitization is compelling to even the most "challenged" institutions. This new project, however, involves more than simply sitting a scanner in the stacks and keeping it humming.

Traditional practices form the superstructure of any digital project: basic preservation techniques, good descriptive cataloging, and standard arrangement and description must be performed before the first digital image is created. Digitization is not a "replacement activity," but rather an addition to traditional cultural repository techniques and procedures, and in many cases serves as an enhancement of them. Digitization does not necessarily mean starting from scratch; in many cases, it involves building upon work performed years and years ago.

A review of digitization initiatives seems to suggest that successful projects

- have support among institution administrators and boards,
- begin with an inventory and assessment of holdings (whether informal or formal) and their extant information management tools (finding aids, indexes, registration records, etc.),
- find allies among potential collaborators,
- understand and follow standards and best practices being used by other institutions,
- draft a plan that outlines work flow, staffing, a schedule of activities, and a budget, and,
- start with a project that is "do-able," and celebrate early successes.

Before warming up the scanner or setting the digital camera tripod, institutions may wish to ask themselves some questions:

*Why are we considering digitization?*

Is it to answer the frequent queries of a group of users who send email everyday, asking, "What have you scanned that I can see from home?" Is it to meet the

expectations of board members or to have an answer the next time an administrator asks, "Have we thought about putting that on the Web?" Is it for publicity and public relations? Is it to help preserve fragile materials by reducing their handling? Is it to provide the greatest possible access to the treasures your constituents have entrusted to you for safekeeping?

*Does our institution hold materials worth all of this effort?*

Do you hold unique materials or are they the same items held by many other regional collections? Would your holdings be of interest to users searching from home?

*Do we have administrative support for the project?*

Does the boss know what you are up to, and does he or she think it's a good idea? Is the board aware of the resources required? Are the different divisions, branches, or sections of the organization willing to collaborate to make this digitization project successful?

*Do we have the financial and technical support available to sustain a digitization project?*

Where is the extra money going to come from? Who is capable of fixing the inevitable glitches that accompany any project requiring wires, plugs, and a bit of electricity? Who do you have on staff that can "mark-up" the online collection so that it can "speak" to search engines? Can you find appropriate training opportunities, and, once again, where is the extra money going to come from?

*Do we have the copyright to the materials we wish to digitize?*

Do you hold permission letters, or use agreements? Can you get them? Is there any way to determine who holds copyright on your materials?

*Are we willing to commit our institution to the long-term maintenance of our online creation?*

Who will answer the reference questions generated by the online collection? Have you factored in the migration of the digital exhibit into hardware upgrades? Have you assigned space and made arrangements for the preservation of the backups and archived digital materials created by the project?

If you know why you are going to digitize and are content with those reasons, if you hold materials worth the effort and have the support of administrators, if you have the financial and technical underpinnings, and if you are committed to sustaining the effort for the long haul, then you may be ready to begin the digitization process--but creating digital images is still a few steps away.

## **Collaboration**

Cultural institutions have long known the value of collaboration: interlibrary loan, traveling exhibitions, joint conservation centers, and consortial disaster plans demonstrate the willingness and advantages of collaboration. The advent of new technologies has extended

and reinforced many extant collaborative undertakings of cultural institutions. By their very nature, digital projects not only benefit from collaboration through the sharing of resources and expertise but also lend themselves easily to collaborative undertakings. Digitization reduces the distance between repositories to a keystroke, eliminates barriers erected between different types of research materials, reunites separated collections.

Online collaboration offers great promise for the users of cultural materials. Through this collaboration, museum and library collections can be consulted simultaneously. For example, items at the Outer Banks History Center and the Mountain Heritage Center, with an entire breadth of the state physically separating them, share the promise of easily being consulted from one place, the researcher's home. The Internet can link collections never before brought together and virtually reunites holdings that may have been separated, all to the user's benefit.

Equally important, perhaps, is the potential interaction of the state's many excellent small, often volunteer-run collections with the state's major repositories. As a whole, the smaller institutions constitute the largest holders of cultural information in the state of North Carolina. Current surveying results estimate that there are over 900 individual repositories across North Carolina's 100 counties. Many of these small to mid-sized institutions have collections that are at risk for a variety of reasons, particularly preservation and conservation concerns. In addition, many collections have limited or no public access, making them essentially hidden to the public at large. Digitization can dramatically change the visibility and accessibility of these collections. It holds the promise of greatly expanding the state's collective cultural knowledge.

These smaller institutions hold the history of local and regional North Carolina, and it is often within the local and regional collections that schools look to build educational units for their curriculum and to stimulate young students to study history, anthropology, science, literature, and a myriad other subjects. They do it by first looking, quite literally, in their own back yards. Many schools across the state search for sources for local history and find the process frustrating. Digitization initiatives offer solutions to these problems.

The larger institutions within the state, many of which are nationally and internationally recognized, often have greater technological, fiscal and staffing resources. Many have begun digitization or are well into the process. When smaller institutions begin to plan for digitizing their collections, they may want to collaborate with their colleagues at the larger institutions. Larger institutions may, in turn, wish to reach out to smaller, local institutions in order to expand their intellectual base. Often holdings at one institution can be linked to holdings at another, or institutions can share in the development of a digital project built around a particular concept. Small institutions can learn from the larger institution's practices and successes, while contributing valuable insight on content and organization as well as a reality check for technical experimentation.

## **Standards and Best Practices**

Digitization involves a myriad of standards and best practices that inform digital production and access. While standards and best practices are not new to cultural heritage institutions, the nature of digitization makes adherence an imperative. Making decisions about which standards to follow and which practices are really best can be a daunting and overwhelming task. In addition, digital standards are more fluid than traditional standards. Often, they

must be reshaped to quickly assimilate new information services. This fluidity has indeed created a shift in the way we understand the term "standard." Yet, fluid or static, standards make it easier for everyone to use information.

Technical standards are generally developed by a process of voluntary consensus. As those elements of a digital project (the technology, the software, hardware, cataloging standards, etc.) are most often in a continual state of flux and are likely to remain so, consensus can be difficult to reach. Unlike manual practices which have been standardized for years in libraries, the manual practices of museums and archives often relied on idiosyncratic and local processes. As a result, technical standards in archives and especially in museums have been notoriously difficult to establish and have lagged behind the standards of uniform practice adopted in libraries.

Further complicating the picture is the fact that the "pioneer nature" of the digital world encouraged non-standardized practices to proliferate, resulting in local collections exercising their creativity. Today the shifting landscape of digital practice, where revision and conversion dominate the horizon, where practices appear and disappear, and where everyone recommends their favorite solution, can create great confusion for cultural heritage professionals considering digitization. Many library and museum managers have elected to simply wait out the confusion, expecting the dust to eventually settle. They wait for a definitive manual of procedures that will miraculously support their home-grown practices. Others forge ahead informed by a plan of action gathered from their understanding of current practice, exposure to the literature of digitization, and a strong support network. If institutions are to reap the benefits of digitization and compete with the rapid commercialization of cultural collections, it is clear that the latter is the preferred course.

While standards are constantly under revision and can restrict creativity and innovation, there also exists what are referred to as "best practices." Best practices (often the germinator of standards) allow managers to pick and choose among the many practices in use today and to evaluate how those practices might be a good fit within the context of their institutions. Today, best practices guide most of the processes of developing digital projects. Accompanying those best practices are the advances in technology over the last few years. A range of new hardware and software options have greatly simplified digitization efforts. Technology is now more affordable for institutions with limited budgets and does not require extensive technical training to implement and maintain. New technologies and well-developed best practices have enabled many collection managers in smaller institutions to pursue digital solutions to deeper indexing, to access of images, to preservation of fragile collections, and to overall improved retrieval of materials.

## **Conclusion**

Digitization carries great promise for the caretakers of the cultural heritage of North Carolina and for the many people who are interested in its treasures. Running the scanner, snapping the digital camera, or banging the keyboard, however, needs to follow an institutional assessment of support and resources and a careful planning process. If this process leads to a digital project, then that digitization will build upon the conventional practices that provide the foundation for our institutions. Digitization does not replace this; it works in conjunction with it. While digitization enhances conventional access and preservation practices, it carries with it the promise of greater interaction between

collections. This is true only if participating institutions collaborate early to realize this future goal. Best practices and standards are perhaps the best tools to ensure that the collections of separate institutions "speak to each other" in the virtual world, bringing greater value to their users.

It is with the users in mind that the North Carolina State Library Commission, its Access to Special Collections Working Group (now the NC ECHO Advisory Committee), and its many partners throughout the State of North Carolina began their work in 2000. Scholars and students, hobbyists and businessmen may consult that long ago letter or book, that tape recording or handicraft, that forgotten photograph or major work of art, never knowing the first thing about metadata or standards, resolutions or work flow charts. They only know that they've found what they were looking for and that they are happier and better informed for it.

These guidelines are structured to help you successfully initiate digital projects. Chapters 1 and 2 (**Project Planning** and **Selection**) provide direction on the essential initial stages of a digitization project. Chapter 3 (**Legal Considerations**) uncovers some of the major components of United State copyright law as it pertains to digitization, including suggestions and recommendations for activities to undertake to ensure compliance with the law. Chapter 4 (**Digital Production**) outlines the details for creating digital surrogates of your materials. Included are decision-making matrices for hardware and software as well as the technical standards endorsed by NC ECHO. A new section of that chapter deals with the challenges of audio digitization. Chapter 5 (**Metadata**) introduces the concept of metadata and outlines standards in constructing appropriate and adequate metadata to accompany your digital images to assure access to your materials in the online environment. Chapter 6 (**Digital Preservation**) introduces issues about sustainability and long-term persistence of your digital project, including recommendations about storage practices and mediums. Chapter 7 (**Presenting your Digital Project**) covers issues of web design and accessibility to ensure that the hard work of digital production and metadata is not lost in poor presentation on the Internet. Chapter 8 (**Targeting the K-12 Audience**) deals with the specific issues that are important in creating digital projects that will be primarily used by as an educational resource. Finally, Chapter 9 (**Project Evaluation**) discusses the components of evaluation to take into consideration throughout the life of a digital project. Finally, Chapter 10 (**Project Management**) discusses the very real impact of digital projects on institutions from a management perspective. This chapter includes sections on workflow and staffing, training, timelines and objectives, physical facilities, and disaster preparedness.

Taken as a whole, the *Guidelines for Digitization* attempts to offer insight into the many areas that emerge as a digital project is underway. Careful planning and management are essential, but without a clear understanding of the various elements of a digital project, institutions are assured to hit many potholes along the way. These guidelines seek to help you avoid the most common ones.

## **For Further Reading**

*A Framework of Guidance for Building Good Digital Collections*, Digital Library Forum, Institute of Museum and Library Services, available at:  
<http://www.niso.org/framework/Framework2.html>

Kenney, Anne R. and Oya Y. Rieger. *Moving Theory into Practice: Digital Imaging for Libraries and Archives*. Mountain View, CA: Research Libraries Group, 2000.

*Moving Theory into practice: A Digital Imaging Tutorial*, Cornell University Library, available at: <http://www.library.cornell.edu/preservation/tutorial/contents.html>

Smith, Abby, "Why Digitize?" Washington D.C.: Council on Library and Information Resources, 1999. available at: <http://www.clir.org/pubs/reports/pub80-smith/pub80.html>